

PATENT APPLICATION

**RESPONSE UNDER 37 CFR §1.116
EXPEDITED PROCEDURE
TECHNOLOGY CENTER ART UNIT 3651**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Takamitsu KAWAI

Group Art Unit: 3651

Application No.: 10/806,174

Examiner: L. NICHOLSON III

Filed: March 23, 2004

Docket No.: 119212

For: FEEDING DEVICE FOR FEEDING RECORDING MEDIUM

REQUEST FOR RECONSIDERATION UNDER 37 CFR §1.116

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In reply to the August 9, 2006 Office Action and the January 4, 2007 telephone interview, the extendible period for reply extended by the attached Petition for Extension of Time, reconsideration of the above-identified application is respectfully requested. Claims 1, 3-7 and 10-21 are pending.

Applicant appreciates the courtesies extended to Applicant's representative during the January 4, 2007 telephone interview. Applicant's record of the telephone interview is summarized below.

An Election of Species was required in this application and Applicant elected Figs. 2, 3 and 5-7. Claims 1, 3-7, 10-15, 20 and 21 read on the elected species and claim 1 remains generic to claims 16-19. Applicant requests rejoinder of claims 16-19 when claim 1 is found to be allowable. See MPEP 821.04.

Claims 1, 3, 5, 6, 10, 11, 20 and 21 were rejected under 35 U.S.C. §103(a) over Lightner et al. (Lightner), U.S. Patent No. 6,305,684, in view of JP-A-9-86749 (JP '749) and Matsumoto, U.S. Patent No. 6,712,463. The rejection is respectfully traversed.

Page 4 of the Office Action asserts that it would have been obvious to replace Lightner's forwarding rollers 34 with Matsumoto's spur 9, and that such a replacement would create the driven roller and overlap-amount limiter of claims 1 and 10. In reply to the rejection, Applicant (1) first clarifies why Matsumoto's spur 9 would not replace Lightner's forwarding rollers 34 and (2) explains why Lightner fails to disclose or suggest the overlap-amount limiter of claims 1 and 10.

(1) As discussed during the January 4, 2007 telephone interview, the resulting structure created by the combination asserted in the Office Action cannot move sheets in the forward direction. Lightner's invention also cannot operate without the forwarding rollers 34. Lightner's forwarding rollers 34 are used to move sheets in the forward direction and Lightner's reversing rollers 36, which rotate at a slower speed and in the same direction as the forwarding rollers 34 (col. 11, lines 50-58), are used to separate and move extra sheets in the reverse direction. Accordingly, if Lightner's forwarding rollers 34 were replaced by Matsumoto's spur 9, the resulting structure would fail to include a roller that can move sheets in the forward direction because Matsumoto's spur 9 is a driven roller and Lightner's reversing rollers 36 can only move sheets in the reverse direction.

If Lightner's forwarding rollers 34 were removed, it does not appear as if the resulting structure could separate sheets. Lightner's forwarding rollers 34 are made of a material that has a higher friction than the reversing rollers 36 (col. 6, lines 63-66). When a single sheet passes between the forwarding rollers 34 and the reversing rollers 36, the sheet is able to move forward because the forwarding rollers 34 are made of a material that has a higher friction (col. 6, line 66 - col. 7, line 2). If multiple sheets attempt to pass between the

forwarding rollers 34 and the reversing rollers 36, the forwarding rollers 34 move the top sheet in the forward direction and the reversing rollers 36 move the remaining sheets in the reverse direction (col. 7, lines 2-6). Applicants assert that such a process cannot be performed using Matsumoto's spur 9, which is a driven roller, and that it would be difficult separating sheets with Matsumoto's spur 9 and Lightner's reversing rollers 36.

Furthermore, the resulting structure would have two sets of rollers that are displaceable, thus creating a complicated design. In Lightner, in order to control a gap or space between forwarding rollers 34 and reversing rollers 36, the reversing rollers 36 are adjustable with respect to the forwarding rollers 34 (Fig. 8 and col. 10, lines 66 - col. 11, line 3). In Matsumoto, in order to control a gap or space between the discharging rollers 6 and the spur 9, the spur 9 is adjustable with respect to the discharging rollers 36 (Fig. 3 and col. 6, lines 10-33).

Thus, even if Matsumoto's spur 9 were to be used in Lightner (which Applicant does not admit because of the obvious differences between the structures), the spur 9 would replace Lightner's reversing rollers 36. Contrary to page 4 of the Office Action, if fewer parts were desired (which neither reference discloses), Matsumoto's spur 9 would replace Lightner's reversing rollers 36 in order to avoid having two displaceable rollers. Furthermore, although Lightner may not expressly disclose a biaser as in JP '749, if a biaser were to be added to Lightner, the biaser would be placed on the reversing rollers 36 because it is Lightner's reversing rollers 36 that are displaceable in a direction away from the forwarding rollers 34.

For the reasons discussed above and as discussed during the telephone interview, Matsumoto's spur 9 would not replace Lightner's forwarding rollers 34 because (a) the resulting structure could not move sheets in the forward direction, (b) sheets could not be separated and (c) a complicated structure would result.

(2) Lightner, JP '749 and Matsumoto fail to disclose or suggest a feeding device with an overlap-amount limiter that includes a contact portion that is positioned within an annular recess of a drive roller and which is, during absence of a recording medium between the drive roller and a driven roller, held in contact at a surface thereof with a radially outer end portion of the driven roller, as recited in claim 1 and as similarly recited in claim 10.

Applicant first notes that it would not have been obvious to replace either of Lightner's rollers 34, 36 because of the way in which Lightner operates the rollers 34, 36 as discussed above.

As discussed, only Lightner's reversing rollers 36, which is a drive roller, (and not the forwarding rollers 34 as identified in the Office Action) can correspond to the driven roller of claims 1 and 10 because it is only Lightner's reversing rollers 36 that are displaceable. Lightner fails to provide any disclosure or suggestion with regard to any structure that is (1) positioned within an annular recess of the forwarding rollers 34 and (2) held in contact at a surface thereof with a radially outer end portion of the reversing rollers 36 during an absence of a recording medium between the forwarding rollers 34 and the reversing rollers 36. The Office Action identifies Lightner's fingers 73 as corresponding to the overlap-amount limiter of claims 1 and 10. However, Lightner's fingers 73 and guide plate 66 are not held in contact at a surface thereof with a radially outer end portion of the reversing rollers 36 during an absence of a recording medium.

JP '749 fails to disclose or suggest the overlap-amount limiter of claims 1 and 10. JP'749 discloses a spur 16 (driven roller) (Fig. 4A). However, JP'749 fails to disclose an overlap-amount limiter that is held in contact at a surface thereof with a radially outer end portion of the spur 16, during an absence of the recording medium. If sheet material does not exist between the friction body 20 and the spur 16, the contact end of the spur 16 is kept from coming into contact with the friction body 20 (Abstract).

Matsumoto, similar to JP '749, fails to overcome the deficiencies of Lightner because Matsumoto fails to add any structure to the spurs 9.

It is respectfully requested that the rejection be withdrawn.

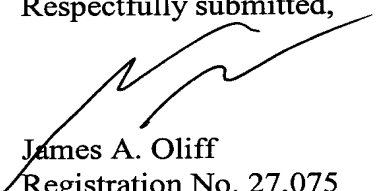
Claim 4 was rejected under 35 U.S.C. §103(a) over Lightner in view of JP '749, Matsumoto and Rider et al. (Rider), U.S. Patent No. 5,653,439, claim 7 was rejected under 35 U.S.C. §103(a) over Lightner in view of JP '749, Matsumoto and Bekki, U.S. Patent No. 5,606,357, claims 12 and 13 were rejected under 35 U.S.C. §103(a) over Lightner in view of JP '749, Matsumoto and Uchikata, U.S. Patent No. 5,961,234, and claims 14 and 15 were rejected under 35 U.S.C. §103(a) over Lightner in view of JP '749, Matsumoto, Uchikata and Asano et al. (Asano), U.S. Patent No. 5,291,224. The rejections are respectfully traversed.

Rider, Bekki, Uchikata and Asano fail to overcome deficiencies of Lightner, JP '749 and Matsumoto as applied to claims 1 and 10. It is respectfully requested that the rejections be withdrawn.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Petition for Extension of Time

Date: January 9, 2007

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